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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHAM, KHANH B

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/692,508	Applicant(s) NOVIK, LEV	
	Examiner Khanh B. Pham	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-15,17 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-15,17 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed November 21, 2007 has been entered. Claims 1, 11, 21 have been amended. Claims 6, 16, 26 have been canceled. Claims 1-5, 7-15, 17-25, 27-30 are pending in this Application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-15, 17-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims **lack the necessary physical articles or objects to constitute a machine** or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it

becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5, 7-15, 17-25, 27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1, 11, 21 recite the limitation "the enumerated changes to the first instance of the data platform" in lines 15-16. There is insufficient antecedent basis for this limitation in the claim. The previous steps of the claims recite : "enumerating, by the

first instance of the data platform, **changes to change units**". Therefore, "changes to change units" are different from "changes to the first instance of the data platform".

Similarly, the meaning of "change number of a second instance of the data platform" is unclear because changes are only applied to "change units" within the first and second instance of the data platforms, not the instances of the data platform themselves.

6. Claims 2-5, 7-10, 12-15, 17-20, 22-25 and 27-30 recite "said instance", "first instance" and "second instance", it is unclear whether they are same as "first instance of a data platform" and "second instance of the data platform" recited in the independent claims 1, 11, 21 . Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-5, 7-15, 17-25, 27-30** rejected under 35 U.S.C. 103(a) as being unpatentable over Peng (US 2001/0048728 A1), and in view of LaRue (US 7,013,313 B1).

As per claim 1, Peng teaches a method for synchronizing a plurality of instance comprising:

- "storing a plurality of items in a first instance of data platform, each item stored in the first instance includes at least one change unit, wherein the data platform is configured to track changes to change units" at [0034];
- "storing, by the first instance of the data platform, a change to a first change unit of a first item, wherein the first item is a child of a parent item and the first item and the parent item are included in the plurality of items" at [0029];
- "storing, by the first instance of the data platform after the change to the first change unit of the first item, a change to a parent change unit of the parent item" at [0044];
- "uniquely enumerating, by the first instance of the data platform, changes to change units in sequential order, wherein each change is identified by a change number" at [0035];
- "maintaining, by the first instance of the data platform, a separate vector, wherein the separate vector corresponds to the enumerated changes to the first instance of the data platform, and a most recent known change number of a second instance of the data platform, wherein separate vector represents all changes that have been made to the first instance of the data platform" at [0034], [0036], [0039]-[0041];
- "receiving, by the first instance of the data platform from the second instance of the data platform, a synchronization request, wherein the synchronization request includes a second vector associated with the second instance of the data platform" at [0052];
- "determining, by the first instance of the data platform, that the second instance of the data platform does not include the change to the first change unit of the first item

and the change to the parent change unit of the parent item in accordance with the second vector" at [0053]-[0054], [0057];

Peng does not explicitly teaches "transmitting, by the first instance of the data platform, the change to the parent change unit of the parent item prior to transmitting the change to the first unit of the first item" as claimed. However, LaRue teaches a similar method for data synchronization, where parent records are transmitted and synchronized before child records at Col. 33 line 45 to Col. 34 line 38 and Figs. 8. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine LaRue with Peng's teaching in order to provide "an improved system and improved techniques that provide the capability for user modification of inherited information and the capability for synchronization of inherited information with other datasets" as suggested by LaRue at Col. 3 lines 1-10.

As per claim 2, Peng and LaRue teach the method of claim 1 discussed above. Peng also teaches wherein "said change number comprises a unique identification number for said instance and a relative incremental count of changes made to said instance" at [0035].

As per claim 3, Peng and LaRue teach the method of claim 1 discussed above. Peng also teaches: wherein "a first instance, to partially synchronize with a second

instance, requests changes from said second instance by sending to said second instance its vector, and wherein said second instance, based on the vector it receives from said first instance, sends to said first instance only those changes that said first vector has not yet received" at [0055], [0073]-]0074] and Figs. 7-16.

As per claim 4, Peng and LaRue teach the method of claim 3 discussed above. Peng also teaches: wherein "said second instance, based on the vector it receives from said first instance, further determines that said first instance has changes that said second instance has not yet received, and sends its own vector to said first instance to request these changes, and wherein said first instance, based on the vector it receives from said second instance, sends to said second instance only those changes that said second vector has not yet received" at [0055], [0073]-]0074] and Figs. 7-16.

As per claim 5, Peng and LaRue teach the method of claim 1 discussed above. Peng also teaches: wherein "a first instance, when changing a first Item to relate via a Relationship to a second Item that was not previously being synchronized, to send all change information pertaining to said second Item to a second instance when synchronizing with said second instance so that said second Item in said second instance is synchronized with said second Item in said first instance" at [0055], [0073]-]0074] and Figs. 7-16.

As per claim 7, Peng and LaRue teach the method of claim 1 discussed above. Peng also teaches: wherein, “for an Item deleted by a first instance, a tombstone comprising the identification of the Item deleted is created, and said tombstone is sent as part of a synchronization to notify a second instance to identify the Item to be deleted in said second instance” at [0093] and Figs. 7-16.

As per claim 8, Peng and LaRue teach the method of claim 7 discussed above. Peng also teaches: wherein, “for a first instance having a parent Item and a first child Item to said parent Item, when said child Item is deleted and then said parent Item is deleted, said first instance sending only the change to said parent Item to a second instance during a synchronization where (a) the deletion of a parent Item automatically results in the deletion of all children Items for said parent or (b) the second instance, receiving the tombstone for the parent Item, proceeds to delete the parent Item and automatically deletes the child Item” at [0091]-[0093] and Figs. 7-16.

As per claim 10, Peng and LaRue teach the method of claim 1 discussed above. Peng also teaches: wherein, “for synchronization between a first instance on a storage platform that allows a dangling relative reference and a second instance on a storage platform that does not allow a dangling relative reference that include at least one change to a relative reference and at least one other change, sending said change to said relative references after said one other changes” at [0091]-[0093] and Figs. 7-16.

Claims **11-15, 17-18, 20-25, 27-28, 30** recite system and medium for performing similar method as in claims 1-8, 10 and are therefore rejected by the same reasons.

9. **Claims 9, 19, 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Peng and LaRue, as applied to claims above, and in view of Sakaki (US 2004/0267834 A1), hereinafter "Sakaki"

As per claims 9, 19, 29, Peng and LaRue teaches the method, system and medium of claims 1, 11, 21 as discussed above. Peng and LaRue do not explicitly teach the further limitation of claim 9, 19, 29. However Sasaki teaches a similar method for data synchronization including the step of:

"wherein a first Relationship and a second Relationship of a first instance swap names using a temporary name element such that, in order, (a) the name of the first Relationship is transferred to said temporary name element, (b) the name of the second Relationship is transferred to said first Relationship, and (c) said name stored in the temporary name element is copied to said second Relationship, and wherein said first instance synchronizes with a second instance and sends a duo of change units representing, in order, (i) the new name for said first Relationship and (ii) the new name for said second Relationship, and wherein effecting the first change of said duo of changes results in an attempted change having an error in the second instance because a result of said first change is for the first Relationship and the second Relationship having the same name, a method by which said second instance proceed

to copy said name of the first Relationship to a local temporary name element" at [0045], [0068] and Figs. 3A-6;

"if, during the synchronization, a subsequent change is received for copying the name of said second Relationship to said first relationship occurs, then performing said change as well as also copying said name in said local temporary name element to said first Relationship; and if, during the synchronization, a subsequent change is not received for copying the name of said second Relationship to said first relationship occurs, then raising a conflict regarding for the attempted change" at [0054], [0068], and Figs. 3A-6.

Thus, it would have been obvious to one of ordinary skill in the art to combine the Peng with Sasaki's teaching because the elements as disclosed by Sasaki would have enable Peng '728 to avoid conflicts with the storage of processing capacities of the mobile device, such as, using excessive amount of memory to store related objects which adversely impacts the performance of the mobile device (Sasaki [0005]).

Response to Arguments

10. Applicant's arguments with respect to claims 1-5, 7-15, 17-25, 27-30 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant argued that Peng fails to teach "maintaining, by the first instance of the data platform, a separate vector, wherein the separate vector corresponds to **the enumerated changes to the first instance of the data platform**, and a most recent

know **change number of a second instance of the data platform**". However, the limitation is rejected under 35 U.S.C 112, 2nd paragraph as being indefinite. The previous steps of the claim recite : "enumerating, by the first instance of the data platform, changes to change units". Therefore, "changes to change units" are different from changes to the first instance of the data platform". Similarly, the meaning of "change number of a second instance of the data platform" is unclear because changes are only applied to "change units" within the first and second instance of the data platforms, not the instances of the data platform themselves.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Khanh B. Pham
Primary Examiner
Art Unit 2166



February 4, 2008